

Claims 1-19: Canceled

- 1 **20.** (previously presented) The method set forth in claim 25 wherein:
- 2 the step of making a lay-up includes the steps of:
- 3 wrapping each tube in the joint with a first carbon fiber fabric that is impregnated with the
- 4 matrix material, the ends of the fabric extending beyond the tube;
- 5 wrapping the ends of the carbon fiber fabric that is wrapped around a given tube around the
- 6 tube the given tube joins to;
- 7 wrapping the entire joint in a second carbon fiber fabric whose fibers have an orientation
- 8 different from that of the fibers in the first carbon fiber fabric.

1 **21.** (canceled)

1 **22.** (canceled)

- 1 **23.** (original) The method set forth in claim 20 wherein:
- 2 the step of wrapping the entire joint is done such that all seams in the second carbon fiber
- 3 fabric are at the top and bottom of the tubes and the second carbon fiber fabric is overlapped at the
- 4 seams.

1 **24.** (canceled)

1 **25.** (currently amended) A method of making a lug for a joint that joins carbon fiber
2 tubes in a bicycle frame,

3 the method employing a closable mold that may be closed around the tubes and the
4 method comprising the steps of:

5 making a lay-up of at least carbon fibers and a matrix material around the tubes at
6 the joint, the lay-up forming a continuous wrap around the tubes and being enclosed by
7 the closed mold;

8 including an expandable element that is also enclosed by the closed mold;

9 applying a mold having abutting parting planes to the joint, the applied mold's
10 inner surface completely enclosing the lay-up and the tubes at the joint closing the mold
11 around the lay-up, the tubes at the joint, and the expandable element; and

12 applying heat to the mold's interior, the heat causing the lay-up to cure and further
13 causing an expandable element located between the mold and the tubes to expand and
14 compact the enclosed lay-up against the tubes evenly throughout the lug curing the layup
15 while the mold is closed, the cure of the layup causing expansion of the expandable
16 element and the expansion compacting the enclosed layup against the tubes such that,
17 whereby voids in the lug are prevented.

1 **26.** (currently amended) The method set forth in claim 25 wherein:

2 in the step of curing, the layup is cured by applying heat thereto;

3 the mold conducts heat; and

4 in the step of applying heat, the mold is made of a heat conducting
5 material and the heat is applied to the mold.

27. (previously presented) the method set forth in claim 25 wherein:

 the distance between the inner surface of the mold and a tube being joined
decreases as the distance from the joint increases,
whereby the lug tapers towards the tube.

1 **28.** (currently amended) The method set forth in claim 25 wherein:

2 the step of including the expandable element is performed by lining the mold is
3 lined with silicone; and
4 in the step of applying heat, the expandable element is the silicone.

1 **29.** (currently amended) The method set forth in claim 25 wherein:

2 the step of including the expandable element is performed by making the lay-up
3 includes the step of including a layer of expandable syntactic foam in the lay-up; and
4 in the step of applying heat, the expandable element is the expandable syntactic
5 foam.

1 **30.** (currently amended) The method set forth in claim 20 wherein:

2 the step of including the expandable element is performed by making a lay-up
3 further includes the step of:
4 including a layer of expandable syntactic foam in the lay-up.

1 **31.** (currently amended) The method set forth in claim 30 wherein:

2 the step of including a layer of expandable syntactic foam is performed included
3 in the layup before the step of wrapping the entire joint in a second carbon fiber fabric.